

SCHIZASTER MORLINI, A NEW SPECIES OF ECHINOID FROM THE PLIOCENE OF IMPERIAL COUNTY, CALIFORNIA

By U. S. GRANT, IV¹, AND LEO GEORGE HERTLEIN²

In March, 1955, Dr. G. Dallas Hanna, Curator of the Department of Geology, California Academy of Sciences, received from Mr. W. Morlin Childers of El Centro, California, a letter accompanied by specimens and photographs of a fossil echinoid found at Coyote Mountain, Imperial County, California. Mr. Childers mentioned that the specimens resembled *Schizaster martinezensis* Kew, but he recognized that differences existed between the two and suspected that his specimen might represent an undescribed species.

The specimens were submitted to the junior author for identification and it became evident that they represented an undescribed species. Further correspondence between Hanna and Childers led to a request that the present authors study and describe the species. Four specimens have been available for this study.

The authors wish to thank Mr. Childers and Dr. Hanna for the opportunity to study and describe this interesting new species, the first species of *Schizaster* from Post-Eocene beds in southern California.

Schizaster morlini new species

Plate 29, Figures 1-8

Test broad, oval, greatest width at about the middle of the length and anterior to the apical system; greatest height at interambulacrum 5, which is keel-shaped; posterior high, vertical, somewhat concave around a large periproct; actinal surface slightly convex, labrum prominent with peristome wide, somewhat

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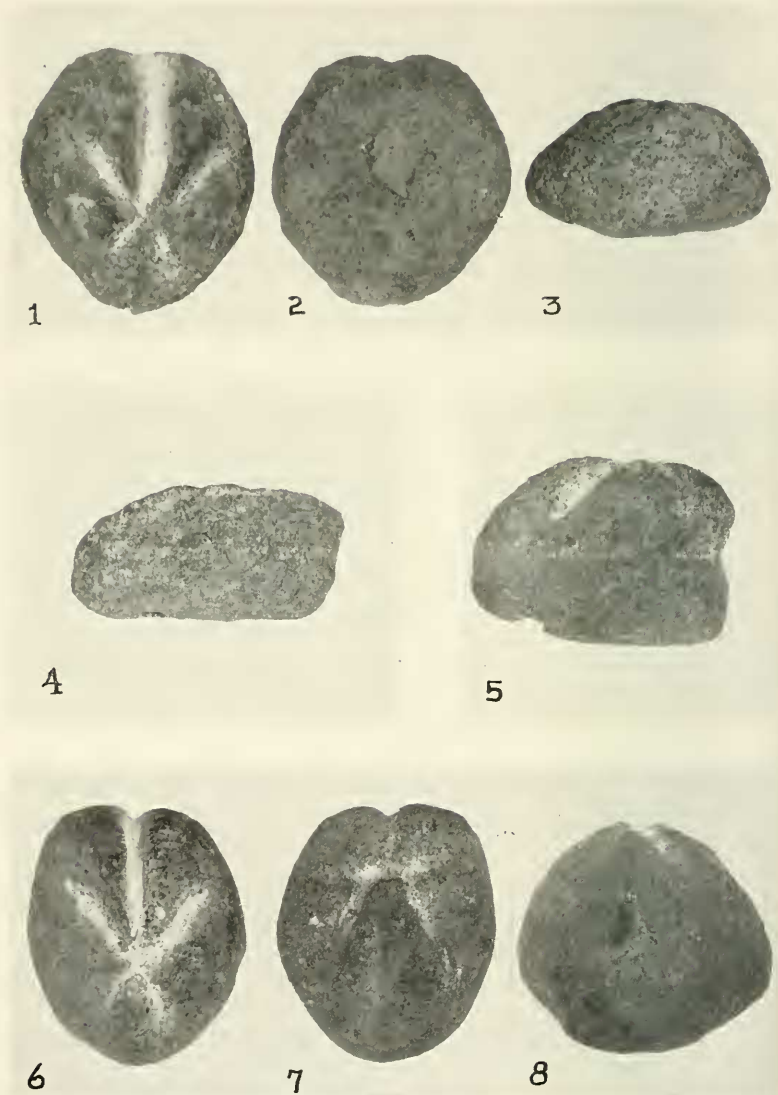


PLATE 29

Figs. 1-8. *Schizaster morlini* Grant & Hertlein, new species. Holotype, length 54 mm.; width, 49.5 mm.; height, 24 mm. Fig. 1. Abactinal view. Fig. 2. Actinal view. Fig. 3. Posterior end view. Fig. 4. Lateral view. Paratype, length, 35 mm.; width, 29.5 mm.; height, 26 mm. Fig. 5. Lateral view. Fig 6. Abactinal view. Fig. 7. Actinal view. Fig. 9. Posterior end view. The original shape of the specimens has been altered somewhat due to compaction of the enclosing sediment.

sunken; all petals sunken, particularly the anterior unpaired III, which has vertical walls and extends to anterior ambitus; posterior paired ambulacra, I and V, short, not extended to the margin of the test; fascioles indistinct and incomplete, apparently due to lack of preservation; genital pores obscured. Measurements of holotype: anterior-posterior length 54 mm.; width 49.5 mm.; height 24 mm. Measurements of paratype: length 35 mm.; width 29.5 mm.; height 26 mm.

Holotype and Paratype (Calif. Acad. Sci. Dept. Geology Type Coll.) from the southern slope, approximately midway east to west about two thirds of the way to the top of Coyote Mountain, Imperial County, California, in a sandstone formation; Pliocene. Specimens of a coral, *Eusmilia carrizoensis* Vaughan, were found at approximately the same locality.

This new species differs from *Schizaster cristatus* Jackson (1917, p. 499, pl. 68, figs. 2-4), from the "Upper Oligocene or Miocene" of Brazil, Costa Rica, in its less prominently raised keel in interambulacrum 5, the narrower and more steep-sided ambulacrum III, and the larger angle between the posterior paired ambulacra. *Schizaster morlini* n. sp. differs from *S. panamensis* Jackson (1917, p. 500, pl. 66, figs. 2-3) of the Gatun formation, Canal Zone, in the more deeply sunken petals and wider bivaial angle. The new species here described differs from *Schizaster stalderi* Weaver (1908, p. 274, pl. 21, fig. 3) in the more depressed unpaired anterior ambulacrum, the narrower space between the bivium, the more elevated keel in interambulacrum 5, and in the less anterior position of the peristome. Weaver's species occurs in Pliocene strata at the mouth of Bear River, Humboldt County, California, but has not been authoritatively reported in the southern part of the state.

This new species is named for Mr. W. Morlin Childers, El Centro, California, who collected the type specimen.

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TWO NEW SPECIES OF NASSARIUS FROM THE PLIOCENE OF LOS ANGELES COUNTY, CALIFORNIA

By GEORGE P. KANAKOFF

In May, 1954, the author reported a new *Kelletia* from the Upper Pliocene of the Pico Formation from Humphreys Quadrangle in Los Angeles County¹. During the following months the several tons of silt collected from the locality yielded a large marine fauna in a good state of preservation. The lumps of matrix, ranging from almost black to light gray in color and from silt to shale in consistency, had first to be dried, then soaked in sieves half-submerged in water to separate the shell material from the matrix. When again dried so that the shell material was hard enough to handle, the specimens were sorted and studied.

Among the forms segregated are two new species of *Nassarius*, one very abundant, the other comparatively rare. These are the subject of the present paper.

Nassarius stocki sp. nov.

HOLOTYPE: The holotype No. 1109 in the Los Angeles County Museum (Pl. 30, figs. A and C), collected by the author, May 10, 1954.

¹Kanakoff, G. P., 1954, Bull. So. Calif. Acad. Sci. V. 53, pl. 2, pp. 114-117.